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REPORT ON JOINT EEC/ACP/ECA STUDY ON THE NEEDS FOR STATISTICAL TRAINING IN AFRICA

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GENERAL REPORT

I. BACKGROUND AND OBJECTIVES OF THE STUDY

1. The Statistical Training Programme for Africa (STPA) was adopted at the tenth session of the Conference of African Statisticians in 1977. Its objective was to ensure that the region has a permanent supply of trained staff for the statistical and other services of governments as well as the private sector. It was conceived as a ten year programme aiming to make Africa self-sufficient in statisticians. Fifteen regional training centres participate in the programme (see annexed list of statistical training centres participating to STPA) and a further five European institutes are associate members. The STPA is coordinated by the Economic Commission for Africa.

2. Various constraints prevented the STPA from achieving its full potential in relation to the aim of self-sufficiency for African statistical services. Three main constraints were identified:

(1) Under-utilisation of existing facilities due to lack of information on courses offered, admission requirements and financial resources;

(2) Loss of trained personnel to other government departments, private sector, and to more developed countries;

(3) A tendency for many training courses to be too mathematical.

3. However, it was the first constraint, in particular lack of financial resources, that led the ACP Council of Ministers at its 26th Session in 1980 to approve, in principle, presenting the STPA to the European Community for financial assistance in the following forms:

(1) Finance of fellowships to enable students to attend the regional statistical centres;

(2) Finance of lecturer posts at the regional training centres to enable African counterpart lecturing staff to be trained;

(3) Finance of fellowships to train African lecturing staff for the regional training centres.

4. It seems that in the past the number of scholarships available has probably been adequate for the number of places available on STPA courses. However, lengthy application procedures and complications caused by the admission regulations have meant that these scholarships have been under-utilised.

5. In order to formulate an effective response to the longer-term requirements of the STPA, the Statistical Office of the European Community (SOEC) was asked to carry out a study to analyse the needs for statistical training in Africa over the next ten years. It was to take account of studies carried out under the aegis of the ECA, by

SOEC and CESD in 1975 covering French-speaking countries, and that done by the ECA for the STPA. The study has had the full support of the ECA and of EC Member States. The latter have also seen the study as valuable in guiding their own programmes on this field.

6. This study has had three main objectives. The first was to heighten awareness by government authorities of the importance of comprehensive and reliable statistics. The second was to collect information, country by country, on the basis of which it would be possible to estimate statistical training needs for the next ten years by type and level of training. The third objective was to evaluate the resources which would be necessary to satisfy these needs, the ways in which these resources might be provided by external assistance, and the conditions required to ensure the effectiveness of such assistance in improving African statistical services.

7. The first two stages were carried out during visits to the majority of ACP African countries, and separate reports have been prepared on each country and each STPA centre visited. The country reports analyse the status of the statistical system, the employment of statisticians and training patterns already established. The centre reports describe the background and activities of the STPA centres. The present report summarises the detailred analyses presented in the individual reports. It has two main sections; the general report and the conclusions and recommendations made for each country and each STPA centre.

8. The visits were carried out by the following people:

Visits to selected countries to heighten awareness of the importance of statistics:

English-speaking countries: Prof. J. Durbin, The London School of Economics
Dr. P. Erba, Director, SOEC,
Mr. W. L. Booker, Head of Statistics Division, ECA

French-speaking countries: Dr. V. Paretti, President of the CESD
Dr. S. Ronchetti, Director, SOEC.

Data-collection visits:

English-speaking countries: Miss J.J. Church, Statistician, on leave to SOEC from ODA for the study, (accompanied by Mrs. M.TLALE of ECA Statistics Division for the visits to West Africa)

French-speaking countries: Mrs. A.-M. James, Cooperation Department INSEE
Mr. J.-J. Branchu, Cooperation Department, INSEE
Mr. B. Tissier, Cooperation Department, INSEE,

Mr. S. Ronchetti, Directorate E, SOEC,
Mr. A. De Michelis, Directorate E, SOEC,
Mr. D. Byk, Directorate E, SOEC.

9. The present report has been prepared by Mr. D. Byk, Miss J.J. Church and Mr. D. Kouassi (of ECA Statistics Division) in collaboration with the various people who participated in the country visits. The final draft has been written by Mr. Byk and Miss Church.

10. During the course of the project, various difficulties arose which limited its geographic coverage.

(1) The Maghreb countries have not been taken into account. The Directorate General for Development of the Commission of the European Communities ruled that since the African countries were not signatories to the Lomé Convention, the request from the ACP Council of Ministers did not include them. However students from ACP countries might study in the centres located in those countries.

(2) Angola and Mozambique also are not signatories to the Lomé Convention. Nevertheless the ECA offered to collect and anlyse information to assess the situation in these countries but this was not possible for administrative reasons. Together with other countries such as Guinea-Bissau and the Cape Verde Islands, they do not use either of the languages of instruction at STPA centres. It would doubtless be very useful to carry out a similar study to assess the needs of these countries but the fact that it has not been possible to include them in this study does not invalidate the conclusions drawn concerning countries using existing STPA centres.

(3) Security conditions caused the cancellation of the visit to Chad and the postponement of that to Upper Volta. (The visit to the latter country was postponed because a change of government took place just as the mission was about to be carried out).

11. In describing the objectives of the study and the ways in which it was carried out, it is important to underline two essential aspects:

(1) Although one of the major concerns was to collect quantitative information on training, another aim no less important was to gather qualitative information in order to understand the nature of the problems which lie behind the figures. The overall effect of these problems has been that for the last twenty years or so, many African statisticians have been trained but African statistics have not made significant progress and in some cases have even regressed.. One of the aims of this study has been to discuss this aspect, as well as the purely quantitative one on which previous studies concentrated.

(2) The factors which should govern the orientation, or re-orientation if that should be necessary, of statistical training and the support which it should be given must be sought by analysing the way in which the statistical system functions, its relationship with the general government machinery, with users and producers of data and the image it projects.

II. GENERAL VIEWS OF NATIONAL AUTHORITIES ON OVERALL TRAINING POLICIES AND THE PRIORITY GIVEN TO STATISTICS

12. The general impression gained during the course of the missions from contacts made either with political authorities or with high-level government officials, was that a good statistical apparatus is considered necessary by every country. It was recognised that to achieve this, statistical training must be an important part of the professional training programme which itself is accorded high priority. The enthusiasm shown for improving statistical services appeared genuine and was widespread. However, one must wonder whether this attitude results at least partly from a knowledge of the sphere of interest of the visitor.

13. In general, few countries analyse their training needs in any detail. Planning in the area of training has not yet become a reality beyond merely stating broad principles and objectives. Failure to quantify training needs is illustrated by two characteristics which apply to most countries:

(1) the university system is producing many graduates in sectors where employment prospects are now limited,

(2) it is very seldom that a country can provide statistics on the numbers of scholarships awarded in the past by source of funding or subject of study, and even less frequently on how many will be available in the future.

14. These characteristics, particularly the first, are certainly not confined to the developing countries, but in countries where investment in training is of the utmost importance and often very costly as well, such weaknesses have important consequences. This is recognised by the countries visited and in many of them manpower planning activities are getting off the ground at the moment, with manpower surveys in progress or about to be started, among them Cameroon, Liberia, Zambia and others. Some countries are studying the procedures for the internal distribution of training awards to consider ways of rationalising and improving them, for example Ivory Coast.

15. Most countries visited have already got a fairly extensive national training programme, although the standard and scope varies greatly from country to country. For such countries the case for training and personnel abroad has to be examined critically. This is particularly so since it has become more and more clear that the benefits of training abroad to the country itself are far from guaranteed. There are innumerable cases of people trained abroad who do not return to their own country, whatever subject they have studied. Many countries are now questioning the cost-effectiveness of using foreign training facilities abroad and this is already leading to certain new policy criteria. Fellowships for training abroad are no longer awarded for studies which could be pursued at a local institution. There are some types of training, however, which certain countries cannot yet undertake and which would be much too difficult or costly to mount on a national basis, but in the majority cases this is no longer true. Thus, for example, training for middle-level

and support staff is generally available within almost all countries or, if it is not yet available, its development would be feasible. The idea is accepted that is less cost-effective to send staff abroad for training at this level.

16. In countries where middle-level and other support staff training is not available locally, the fairly high cost of training abroad has resulted in a shortage of trained staff. This is a major cause of the imbalance one can observe in the pyramid of staff in post in statistical services. There are often adequate numbers of professional staff trained either to ITS or first degree level, or to ISE or post-graduate level, but a chronic lack of sub-professional staff. It is clear that is a need to redress the balance whilst taking account of cost considerations. Various countries are aware of this and have already taken steps to tackle the situation, for example, the Cameroon, Somalia, Zimbabwe, and others, already have middle-level training programmes. Others such as the Congo, Niger, Madagascar and Sudan, are hoping to develop similar programmes.

17. At this level, and even more importantly, at the professional level, the method of training differs between the English-speaking and French-speaking countries. In the former, statistical training is provided almost exclusively by the University system, whereas the latter tend to train statisticians in specialised schools which are often independent from the University system. There are, of course, exceptions particularly in the French-speaking countries. For example, in Benin, the National Institute of Economics forms part of the University and in Zaire training courses used are often run by the University. In English-speaking countries, sub-professional training is often organised by the national statistical service itself.

18. The two systems are not without influence on each other and there is a general wish to harmonise training course at various levels. Such harmonisation exists amongst the French-speaking countries as a result of the system of coordination supervised between the various schools by CESD. It is also a concern of the English-speaking countries which, perhaps in the light of the francophone experience, are now seeking ways of improving harmonisation which has not existed in the past, mainly because of the large measure of autonomy possessed by their Universities in all aspects of their activities.

19. In all African countries, the statistician as a person is generally held in high regard throughout the public service. This may produce difficulties for the statistical service who often see their most able staff transferred or promoted to other duties in the civil service outside statistics.

20. This ability of the statistician as an individual to work with colleagues from different professions and to undertake different types of work, unfortunately is often not reflected in the contacts between the statistical service and its various partners. Instead, these links leave much to be desired, whether they be with organisations concerned with the day-to-day running of the economy, such as the Ministry of Finance and the Central Bank, or with the Ministry of Planning, which often takes a longer term view. The statistical service is often in the same Ministry as the Planning authorities but this can be "stifling" for statistics.

An extreme case is that of Guinea, where the fusion of the two departments has reduced statistical production practically to zero. However, the contacts are equally poor between the statistical service and the producers of raw data such as private enterprises and government departments whose administrative records are potential sources of statistics. It appears that at both the beginning and at the end of the statistical chain, the links between the statistician and his partners are often inadequate.

III. CONSTRAINTS ON AFRICAN STATISTICAL DEVELOPMENT

21. In many developing countries, there are several important constraints on the proper functioning of the public service. These may take the form of:

(1) A general freeze on salaries, which are often already low compared with those outside the civil service;

(2) A general freeze on recruitment in the civil service, which may be justified by the rapid growth in the past, but which affects all sectors equally irrespective of whether they are under- or over-staffed;

(3) The absence of manpower planning in the public service;

(4) A lack of sufficient funds to cover necessary recurrent costs other than personal emoluments.

All these constraints may affect the statistical services and they are discussed in more detail below. However, it is important to realise that they are not the only sufferers as similar problems affect many parts of the civil service.

Constraints at the Governmental level

22. As has already been said, lip-service is readily paid to the importance of statistics but this is rarely translated into action. Government authorities regard statistics as a necessity but seldom a priority. The location of the statistical service in the government administration and the status of statisticians illustrate this. Often under the direction of the Ministry of Planning, the statistical service generally takes second place to the planners and is seen by them simply as the provider of figures. It is not easy for an organisation placed in a position such as this to take on the central role in national statistical development.

23. Behind this rather discouraging picture, there is a lack of coordination between statistics and other government activities. Certainly many countries agree that statistics are necessary, and therefore so are statisticians, but do not appear to understand why this should be so. Thus in the day-to-day running of the economy the usefulness of the statistical apparatus is not appreciated, often because when information is requested, the statistician can seldom provide it. Statistical activities are expensive and government has to be able to see the benefits which will accrue from a costly exercise before giving it support. It has to be recognised that although statistical information should have an important role in the economic management of a country, statistical activities too often appear to involve only

large-scale operations such as census and lengthy surveys which have large budgets but only produce information with a considerable time-lag, when the results are already of historic interest only or even of no interest at all. There is thus a difference between the service needed and that which often exists, and as a result statistics have been "relegated" and made subordinate to planning, which by its very nature is a long-term activity. Thus statistical activities tend to be grouped with those which governments know should take place but are not convinced of their use, and so consider them to be luxuries. This aspect will be taken into account in the recommendations of this report.

24. The consequence of this attitude to statistics is the inadequacy of the resources allocated to statistical activities, in terms of manpower, buildings, equipment and finance to cover other recurrent costs. The effects of the scarcity of each type of resource on the activities of statistical services will be examined. It should also be noted that statisticians are often disadvantaged in their career development (with slower promotion than similar professional groups) and occasionally in their salaries (for example, allowances may be lower). They may also be intellectually isolated in the sense that they have few contacts with the international statistical world. The connection between these factors and the quality of the statistical system is illustrated by their different characteristics in various countries. Thus those countries where the statistical service enjoys a favoured position have a well developed system of statistics, for example Cameroon, Kenya, Senegal, whereas on the other hand a "wealthy" country such as Ivory Coast has a mediocre statistical system because it pays its statisticians poorly and gives little priority to the Statistical Office.

Constraints at the national statistical service level

25. The shortage of finance and the lack of priority or interest in statistical activities are well illustrated by the problems often faced by statistical services when they have to use government common services, such as a central computer bureau or the government printer. These central services tend to give priority to relatively straightforward administrative work with tight deadlines, such as government payroll rather than to statistical work which is more specialised and takes up more resources. In addition, even when provided, the service is often not very satisfactory: administrative procedures may be lengthy, equipment may be poorly maintained and may thus break down frequently (this is particularly true of computers), and they may have manpower problems. All these difficulties upset the cycle of statistical production, causing delays and preventing continuity in the work of the statistical service. It would often greatly assist statistical services to have their own equipment, or a less centralised service, and would often cost less. This is true of the production of publications, but the contrast is even greater in the area of data-processing with the development of mini-computers and, above all, micro-computers.

26. Shortage of finance to cover the acquisition of such equipment thus hampers the work of the statistical office. This would not require large sums of money, for less than 40,000 ECU, it is now possible to equip a statistical office with a micro-computer, peripheral equipment, and a supply of spare parts. Shortage of finance also

creates bottlenecks in the collection of statistics when it is insufficient to cover the costs of maintaining the necessary infrastructure (let alone its acquisition in the first place). Work may be hampered by the lack of transport equipment, funds to pay enumerators, and inadequate or unsuitable buildings.

Shortage of manpower

27. This problem has many facets. Without doubt the most important at the present time is the general shortage of qualified middle-level personnel and of statistical clerks, which has already been noted above. The imbalance between the number of staff at these levels and those at the professional level means that professional staff find themselves doing sub-professional work, which considerably limits the possibility of creating a permanent, well-organised statistical capability. It is the middle-level staff who organise and carry out the work which lies at the foundation of all statistics, the collection of raw data and the analysis of questionnaires. It is at this level that fieldwork must be planned and monitored and this stage of the work cycle is crucial. Certainly there are always middle-level posts in a statistical office, but they are often vacant. If they are filled, the incumbents frequently have no training in statistics and so cannot apply consistency checks in a questionnaire, or have to follow instructions blindly since the techniques being used are unfamiliar to them. Similar problems exist at the clerical level as well. Very often clerical staff have a poor educational background in mathematics, or even in arithmetic, having left school after the equivalent of O-level or BEPC. This means that enumerators and statistical clerks need some short-term in-service training in the basic techniques of data summary and presentation. Recommendations for action on training in both these areas will be made in this report.

28. Many countries have an acute shortage of professional staff for example, include Ghana, Sierra Leone, Tanzania, Rwanda, Zaire and others. The causes of the shortage may be the inability to create new posts, insufficient finance to cover the salaries of all the existing posts or the difficulty in recruiting suitably qualified personnel The last problem is exacerbated by high staff turnover in these grades as the professional statistician seems to be in great demand to undertake a wide range of work. This favourable image, combined with his frequent "de-professionalisation" in the government statistical office, encourages the statistician to leave to take up other, often more responsible, posts which may bring considerable salary increases. Turnover of staff at this level disrupts the statistical service by weakening the supervision of work in progress and reducing its ability to take on new work. Loss of experienced staff means that to a certain extent the service limits its activities to routine work in order to maintain existing work programmes and does not seek to innovate. This routine statistical production may not be providing the most urgently needed or most useful information needed either for the day to-day monitoring of the economy or for socio-economic development planning.

29. Turnover of professional staff may not be a problem when there is proper staff management. The key factor here is undoubtedly the establishment of a well-structured scheme of service, not only for professional staff but for sub-professional grades too. In-service training should be integrated into the scheme of service to

provide incentives for success at each level. This type of training also provides a way to avoid having to send staff away on training courses (often abroad) which also distrupts the work of the statistical service.

30. Apart from the difficulties associated with equipment, data processing activities are also constrained as few statisticians have knowledge of statistical computing techniques and, more generally, by the lack of trained programmers and systems analysts in the statistics office. The solution to this problem lies not only in the recruitment of data-processing personnel(when such people actually exist in the country) but also in the ability of statistical personnel at all levels to tackle and resolve computing problems. It is necessary to bring the computer and its user much closer together especially with the type of equipment now available, particularly in regard to statistical computing. Statistics and computing are such closely related disciplines that integration of the two could be rapidly achieved as soon as new technology is introduced. Training has an important role to play here and this point will be returned to in the recommendations of this report.

31. In the situation of manpower shortage described above, which is typical of very many African statistical offices, technical cooperation from abroad often brings only a temporary benefit and may even have a detrimental effect in the long-term. The natural reaction of the local statistical service is to use such an officer to fill a gap in their own staff or to provide expertise not available locally. He thus substitutes for a local statistician without having a counterpart to train. When the expatriate departs, he leaves an even larger gap and this may disrupt statistical activities even more.

Poor organisation of the statistical system

32. In many countries there is insufficient coordination in the development and implementation of statistical work. Very rarely does an effective body exist to coordinate such activities. This role often falls to the national statistical office, but its place in the overall government machine does not allow it to undertake the task effectively. Thus projects may be developed by different government departments which virtually duplicate each other, resulting in considerable waste of resources. Where a system of coordination exists in theory (either a National Council of Statistics or a unified statistical service) it is usually under the auspices of one ministry which may find difficulty in imposing its priorities on other ministries unless it controls the funds for all statistical activities or has the backing of a higher authority for example the Prime Minister or President.

33. One particularly serious aspect of the lack of planning and coordination of statistical activities is that several different ministries may have a permanent field-force of enumerators. Nothing is worse that a field-force whose time is not fully occupied because of lack of forethought and lack of coordination between different organisations engaged in survey work (this is true of the agricultural enumerators in Senegal).

34. Inefficient collaboration with the various users of statistics may also result in part from poor organisation of the statistical system. The person wanting information may not know where to obtain it and even the various bodies producing

statistics may not be aware of each other's activities. At the stage of data collection, organisations and individuals who are the source of raw data may be faced with a plethora of requests for the same information from different organisations. This must be an important cause of their non-response and must lead them to question the need for statistics and therefore the need to provide the information for which they have been asked.

35. The last aspect of this type of constraint to be raised here is the imbalance in the distribution of statisticians both within government administrations and geographically within the country. Regional statistical services in a country are often ill-equipped, a situation which results largely from the general shortage of sub-professional staff needed to staff them.

Constraints at the international level

36. International organisations (aid agencies and international statistical organisations) also have some responsibility for the present situation. African statisticians sometimes feel that their activities are dictated more by the requests made by external bodies rather than the real needs of their country. In addition to this concern, which is not without foundation, it is true that international recommendations often stress the need for time-consuming and ambitious projects such as censuses. Even in developed countries, this type of project is difficult to mount and is often subject to long delays. Such recommendations may encourage countries, to embark on operations which may not be in the best interests of their own statistical development. It has already been said that care should be taken to avoid all that is neither useful nor productive. Funds are often available for large-scale, costly exercises, but they may not contribute towards a real strengthening of the statistical office. Donors have been willing to commit an enormous amount of resources to censuses but the failure to provide the data required by other government departments is often raised at the end of each such project. Directors of statistics who continue to seek and accept such funds must be, in part, also held responsible for this.

37. A second criticism of external aid is the apparent lack of coordination, and even duplication, between the contributions of various donors, whether in financial contributions to projects, award of scholarships, or even requests for statistical information. Although statistical services are often tempted to follow several avenues at once to obtain funds, it would be in their interests as well as those of the donors if external aid were to be better coordinated with all other activities in the statistical office, whether internally or externally funded.

The responsibilities of the statistician

38. The constraints described above affect the quality of a statistical service and the impact it can make, but the statistician cannot be absolved from all responsibility. It is possible with few resources to produce results, and indeed it is necessary to do so if additional resources are to be made available. Statisticians must be convincing; they must prove their usefulness, they must concentrate much more on the dissemination and utilisation of the data they produce; they must "sell" their wares.

For example, it is not enough just to publish tables of figures. Statisticians must provide some primary analysis indicating how they may be used, what their significance is and what they mean. Those who are asked to take part in a survey, particularly enterprises, should be given some feed-back which is useful to them or at least shows them the importance of participating in the production of statistics. In being the primary user of the statistics he produces, in concerning himself with their utilisation and dissemination, the statistician will begin to prove his worth and be more likely to obtain more resources. There is too much of a tendency to be content with data collection work, to be too anxious about mathematical rigour and to leave others to disentangle the figures produced. This situation results to some extent from the type of training statisticians receive and this report will consider these points in its recommendations.

IV. CURRENT STAFF POSITION AND OVERALL STATISTICAL TRAINING REQUIREMENTS FOR 1983-1987 AND 1988-1992

39. The current employment of statistical staff is shown in the statistical annex to this report. Similar data have been collected outside this study and these were taken into account in order to arrive at our estimates.

40. The tables show two main imbalances:

(1) Even if there are insufficient professional staff, there is an even more chronic shortage of middle-level staff;

(2) Some countries have found difficulties in getting a sufficient number of their staff through the entrance examinations for training courses, or in having sufficient numbers obtain qualifications. The basis of this problem lies mainly in their preparation either for the examinations or for the courses, in particular their mathematical knowledge. This is true even if, in some cases, a contributory factor may be the procedure for awarding scholarships which prevent them from taking up places on training courses.

41. The demand for statisticians in a country is strongly linked to the availability of local training facilities, in other words, supply tends to govern demand. This is the case in a country such as Ethiopia where statisticians may be found in many government and parastatal organisations because the University of Addis Ababa has been producing a steady supply of statistics graduates for some years; and also in Rwanda where many more statisticians have been trained since IAMSEA was set up.

42. Training needs have been estimated by country and by level of training course and these are presented in tabular form in the annex. These estimates are based on data collected during the missions or obtained from other sources. Where such estimates already existed in the country, these were taken into consideration various factors have been taken into account for each country, the number of staff ideally necessary, the number of posts actually available to be filled, the type and capacity of statistical training facilities available locally. If the number of statisticians ideally needed is very large, this has been modified to take account of

the ability of the statistical service to recruit the necessary staff, otherwise the estimate would be a purely theoretical one.

43. Finally, it is important to note that few countries had really addressed the problem of estimating what their future training needs would be. Therefore the data for each country could well be revised upwards or downwards according to decisions they might take in the future, or training plans they might formulate. It is the country itself which has to decide whether or not it wishes to recruit and train statisticians. There are ways in which it may show such willingness, for instance in programming training fellowships. This point will be returned to later in this report.

V. WAYS OF SATISFYING STATISTICAL TRAINING NEEDS

44. Reference has already been made to the difference between English-speaking and French-speaking countries in their systems of training. This section of the report will discuss the two groups of countries separately.

English-speaking countries

Middle-level

45. The number of staff needing training at this level is such that local training courses are the most efficient way of meeting the demand, except for the smallest countries (such as Seychelles and the Gambia). Of the nineteen anglophone countries, eleven have already developed such courses (five at local STPA centres) and a further three have plans to do so. It has always been an objective of the STPA that wherever possible middle-level training should be available on a national basis, and it appears that this has already largely become a reality in the English-speaking countries.

46. The methods of organising this type of training differ from country to country. Those courses run by STPA centres are full-time with the students generally residing at the institution (i.e. EASTC, University of Ibadan). Most of the others are taught in evening classes (e.g. Ethiopia, Swaziland) and one country is offering the course partly in working hours, partly in the students' own time (Zimbabwe). There seems no best solution and each country has to decide which type of arrangement suits it best. The resources needed for the proper functioning of such a training programme usually include one full-time training officer, or more depending on the size of the programme, finance to pay honoraria to part-time lecturers, small items of equipment such as calculators, simple teaching aids and a properly equipped calss-room prefereably with other rooms available to enable a class to be split up for small group work. Many of the courses already set up do not have all these resources at their disposal and specific recommendations are made in individual country reports on the type of support each needs.

47. In developing middle-level training programmes over the last few years countries have not always studied similar courses being taught elsewhere in the region and there has been little harmonisation in the development of syllabuses. This has meant that there are now a wide range of Certificates and Diplomas awarded from country to country with little to indicate to a potential employer or an institute of higher education what standard the holder has reached. The ECA have recently produced Guidelines on Syllabus for middle-level personnel which suggest the type of material which should be covered at this level. What is needed in addition is an international recognition of the qualifications each institution awards as a means of comparing the standard reached between countries. This could be provided by a link between the courses and the qualifications awarded by the Institute of Statisticians (UK), an arrangement already used by EASTC (on whose syllabuses the ECA Guidelines were largely based) and the Zimbabwe in-service programme. The Institute is prepared to discuss the syllabus of any course with its organisers and may agree to give exemption from their own examinations (up to a certain level) to successful candidates after scrutiny of marked scripts. Thus the local examinations may be considered equivalent to a level of the Institute's own qualifications. All the current and potential course organisers were very interested in investigating the possibility of such a link.

48. It is clear that the main demand for places on middle-level courses at STPA centres will come in the future from the country in which each is located. Demand for places in foreign centres will be restricted to a few countries such as The Gambia and Seychelles because of the impracticality of setting up local courses, and those such as Kenya having special links with a regional centre. These demands will be able to be met by a single centre.

First degree

49. First degree courses in statistics either as a single subject or as part of a combined subject degree are now available in many national universities. Apart from five STPA centres, there are five more countries having University Departments of near future. Therefore at this level too, most training needs are now being met by local institutions. However there are two problems which arise in most countries. First, statistical services consider the courses taught are too mathematical in working statisticians. Second, it seems difficult for employers of statisticians to recruit new graduates, many of whom appear not to join the statistics profession at all.

50. These two problems have led many statistical services to develop a training pattern which does not rely on direct recruitment of new graduates. Instead they prefer to train school-leavers on-the-job and in formal middle-level courses and to chose the most promising to sponsor on first degree courses, preferably those with a practical orientation such as the B.Stat. at Makerere University. It is felt that professional staff trained in this way have a better grasp of work in a national statistical service and are more easily retained in the service. However the whole training cycle takes a very long time to complete, sometimes unnecessarily long because universities often do not give sufficient exemptions for the training already received. Students may find that they must start virtually at the beginning of a degree course and thus repeat a great deal of material already covered in their

middle-level course. Statistical services have found that universities outside Africa are much more flexible in this respect. Recognition of middle-level qualifications by the Institute of Statisticians should enable statistical services to make a stronger case for exemptions from the early stages of university courses. Statistical services should also put pressure on university authorities to give a more practical orientation to statistics courses and could themselves become more involved, for instance by offering to give a series of lectures on their work programme or involving students in survey work. Advantage could be taken the fact that there is now a general realisation by governments that universities should gear their courses much more closely to the country's manpower needs.

51. Although the need for practical orientation and the need to dovetail degree courses with middle-level courses apply to the majority of university courses, whether at STPA centres or not, the latter is particularly important for centres which hope to attract students from a number of countries. At the present time there are anomalies caused by the conflict between general university regulations on exemptions and those which centres themselves would like to operate. The resolution of these problems should be given high priority, in order that training cycles may be as efficient as possible.

52. Most of the five university Departments of Statistics who participate in the STPA have in the past trained far more students from the country in which they are located than foreign students; some have had applications from foreign students very rarely. The development of statistics degree courses outside these centres has been such that this situation is bound to continue, and the demand for places at regional centres by foreign students will decline.

53. There is however one area of need which is not being covered by any institution inside or outside the STPA. A gap has been caused because no UK institution now offers a full-time course leading to the final examination of the Institute of Statisticians, Stage III. If passed this gives Membership of the Institute, generally considered to be the equivalent of an honours degree in statistics. In the past many Africans have studied for the earlier stages of the Institute's examinations by correspondence or have gained exemptions through in-service training courses, but have studied for Stage III in the UK since it is extremely difficult to complete this final part by correspondence. In countries where this pattern has been widespread there is dismay at the new situation. It would be extremely helpful to them if a course could be developed at an STPA centre which accepted candidates with a pass or exemption at Stage II and at the end of which they were qualified for Membership of the Institute.

Postgraduate diploma/M.Sc.

54. All countries stress that their greatest need for training facilities abroad is for postgraduate training in applied statistics. Such courses are required to re-orientate statistics graduates whose first degree was largely mathematical and to give training in statistics to those whose degree was not in statistics. The areas of applied statistics most often mentioned were agricultural statistics, national accounts,

sampling and statistical computing. At present courses outside Africa have to be used and not only is the training often less relevent than that which might be offered in Africa but also there is a higher chance that the trainee will not return to the statistics service.

55. Demography is the only area of applied statistics in which such courses have been developed in Africa, at RIPS and at the Cairo Demographic Centre, and plans for similar courses exist in some universities (for example the University of Addis Ababa). The relative ease of obtaining fellowships at the two regional centres has means that large numbers of demographers have been trained, which in some countries has produced an imbalance in the specialist knowledge of statisticians in post. Demand for training for demographers seems likely to stabilise at the current level, or perhaps decline somewhat, and it is now important to develop similar courses in other branches of statistics.

56. The STPA could have an important role to play in meeting these needs. Courses need to be developed which cover general statistical methods (such as sampling and statistical computing) but which also allow specialisation in a particular area of applied statistics. It would be undesirable to have only one centre offering such courses: at least two would be preferable, each offering different options. Although they would have to be linked to a University in order to have proper recognition of the qualifications they would award, it will be most important that they have the status of regional institutions in order to have as much autonomy as possible, for instance in the choice of candidates admitted. Such centres would need support in terms of buildings and equipment, and in the initial stages probably technical cooperation too. At present Makerere University is the only centre envisaging such a development, although because of the situation in Uganda some countries may not wish to send their staff there, at least in the short-term.

French-speaking countries

Sub-professional staff

57. The best way to respond to the urgent training needs at this level is to make training courses available locally, perhaps with the exception of the very smallest countries.

58. Two regional centres, the ENSEA at Abidjan and the ISPEA at Yaounde, offer such training at present. In the Congo a similar type of training course should begin in October 1983. In Niger and Madagascar similar projects are under consideration and at ENAE in Dakar and at ENE in Benin comparable courses are also available. Countries such as Rwanda, Zaire, Central African Republic, Gabon and Togo might also consider setting up similar programmes.

59. Two categories of staff may be distinguished, the "adjoints techniques" and the "agents techniques".

(1) For "adjoints" training takes two years. In order to distinguish clearly between the various grades of staff, and in particular to avoid confusion between "adjoints" and ENE, those for training as "adjoints" should be

recruited who have left school one year before the baccalauréat. The Guidelines drawn up by the EAM, which reflect the curriculum at Abidjan and that at Yaoundé, can form useful reference material on which to base a syllabus. The primary function of the "adjoint" is to organise the collection and production of statistics.

(2) For "agents", training should be fairly short (one year maximum), very practically orientated, and should take account of the level of education of the candidates. The best recruitment point is at the end of the first stage of secondary school (in the third year, or just after BEPC).

60. It is agreed that in both cases cooperation between local training institutions and statistical services should be encouraged. The resources needed to set up such training facilities are fairly modest: one or two classrooms, a local course organiser at the level of ITS with perhaps a technical cooperation input from abroad for a short period; a budget to cover coaching materials and honoraria for part-time lecturers (these honoraria expenses are about 2,500 BCF per year).

61. In the case of "adjoints techniques", continuation and development of a standard syllabus is not only useful but also necessary because after a few years' work experience they will, because of their qualifications, be possible candidates for the ITS entrance examination. It is therefore important to avoid too great a disparity between countries. On the other hand, although harmonisation of training for "agents techniques" and exchange of information about courses would certainly be useful, it is less urgent.

62. The basis for effective coordination already exists. The entrance examinations for "adjoints techniques" and "agents techniques" are now and will continue to be, organised on a communal basis in many French-speaking countries, either by the ISPEA or by the ENSEA. This link is to be maintained, probably with OECD support, in respect of level of recruitment and content of syllabus. Other aspects are for individual countries to decide. More generally, coordination which brings together French-speaking and English-speaking countries is one of the tasks of the STPA.

63. The development of national training facilities has two particular implications for the three French-speaking STPA centres. Firstly they should support these projects, secondly the two that already offer training courses at this level will need to make more places available for candidates coming from the countries in which they are situated.

Professional level

64. In order to provide training which corresponds more closely to that which statistical services and other employers of statisticians say they need, the STPA training centres offering professional level courses (CESD, ENSEA, ISPEA, LAMSEA, Collège de Statistique de l'ENEA, IFORD) should re-orientate their activities somewhat. More priority should be given to statistical methods, that is methods and concepts of data collection as well as methods of preparation and presentation of statistics. More attention should be paid to data processing, dissemination of data

and data analysis. The emphasis on particular areas of statistics in the training courses available does not always reflect the needs of countries. Thus, whereas training may be widely available in a specialisation such as demography (particularly with the existence of a centre such as IFORD), there may not be sufficient opportunities to study ways of collecting and analysing statistics on the food situation of a country (agricultural statistics, statistics of consumption and so on).

ITS courses

65. The developments which are at present underway (new buildings at ENSEA, IAMSEA and probably at ISPEA development of an ITS course in Benin, a similar project under consideration in Madagascar, the opening of the ENEA at Dakar to students coming from the Sahel countries), and more effective use of the existing facilities will virtually double the number of places available on ITS courses in French-speaking Africa. This growth spread over a number of years (probably about five) will enable the centres to respond adequately to the requirements of the countries they serve.

66. In this analysis of supply of training places, we have also had to examine the demand, in other words the number of candidates capable of following the courses. At the moment certain countries are under-represented on an examination of the distribution of students on courses by nationality. The usual reason is that these countries lack candidates capable of passing the competitive entrance examination, primarily because of their weakness either in mathematics or in numuerical technics. To overcome this handicap it would be useful to set up a system of preparation for the examination for countries such as Niger, Mauritania and Central African Republic. Spread over a period of less than a year, depending on the level, these preparatory courses could be set up using local training institutions or integrated with local "adjoints techniques" training courses. Another possibility of improving the "score" of certain countries would be to attract economics graduates to take the ITS course, particularly since such graduates are often amongst those who find it difficult to obtain employment in many countries.

67. The high-standing of the current ITS courses and the widespread recognition of the qualifications awarded by the centres offering the courses stem mainly from the coordination of the level of recruitment and curriculum which are made possible by the CESD competition. These practices (common entrance competition, planning of courses and so on) should continue and should be extended to other ITS courses which are beginning, or being planned, in various countries (e.g. Senegal, Benin, Madagscar).

68. The role of the STPA centres is therefore to continue their current activities, taking account of the type of changes suggested above,

ISE courses

69. To increase the capacity of courses at this level, the transfer of this training from CESD in Paris to at least two centres in Africa will be necessary. The present situation is that the two centres which could most easily consider taking on this level of training are ENSEA at Abidjan and ISPEA at Yaoundé. This will not be an

easy operation, and is one for which careful preparations must be made if the transfer is not to be accompanied by a fall in standards. The standard will depend not only on the quality of lecturers but also on the intellectual environment of the Centre. Following the example of the transfer of ITS training, it is a question of making the transfer progressively over a period of time. The start of the transfer might take place during the next five years, and it should be completed within ten years. The process should involve a common entrance examination, as with ITS, and cooperation input to support them whilst the new courses are being developed.

70. Even more than for the ITS competition, certain countries have great difficulty in finding candidates who can pass the ISE entrance examination set by CESD (eg, Central African Republic, Mauritania, Niger, Chad, Gabon, Burundi, Rwanda). It is thus even more important to develop preparatory courses lasting at least a year, since the level of the competition is determined by the programme of "Mathématiques générales". Preparatory courses can be set up in the framework of existing institutions (e.g. secondary school, undergraduate university course...).

71. Those STPA centres which might in the future offer these courses should take this into account in planning their future programme and equipment (this is already the case at ENSEA and at ISPEA). For these centres it will also be necessary to provide technical cooperation to set up the courses when the time comes. As regards CESD, the training offered at present could be somewhat re-orientated along the lines suggested above.

Additional requirements

72. Refresher training courses need to be organised as frequently as possible within African countries both for reasons of cost and in order that they should have as wide an audience as possible. Countries identified the following areas in which courses are particularly needed:

(1) familiarisation of statisticians with the new opportunities for processing and dissemination of data offered by micro-computer technology;

(2) courses for users of statistics and providers of primary data (such as company accountants, hospital administrators, school administrators, extension workers in the Ministry of Agriculture or in regional development authorities) to familiarise them with statistical methods and the way in which statistics may be used. In this way closer links may be forged with the statistical service, and opportunities may be created for working together;

(3) exchange of experience between statisticians from different countries on various aspects of statistics and of technical information.

These aims could be achieved in various ways including seminars, workshops, and study tours for statisticians to observe work methods in other African statistical offices.

VI. PROCEDURES FOR HANDLING RESOURCES

73. Three principles have guided the recommendations on this subject:

(1) countries should decide on their own priorities;

(2) administrative procedures should be streamlined;

(3) the activities of STPA centres should be supported.

74. All questions of resource allocation are determined by political decisions. This is true of the creation of new posts, allocation of financial resources, and also the distribution of training fellowships. In the case of some of these resources, such as training fellowships, they are not of course always funded by the state itself. Nevertheless, it is the government which must decide whether or not it wishes to recruit and then train statisticians, and it is the government who must choose how it wishes to use scholarships funded either internally or externally It is in the importance it places on different types of training that the government express its priorities for the various types of manpower. Such decisions cannot be delegated to an external organisation, even a regional one, particularly since if this were so there would be no guarantee that the country could create employment for its returning trainees. It is unrealistic to imagine countries giving up their autonomy in this way. The distribution of scholarships provided by aid agencies such as the EDF, the FAC or ODA through the British Council, is normally determined by the country itself in this way. By these means, each country must take responsibility for deciding where its own priorities lie.

75. The difficulties encountered in obtaining fellowships for statistical training lie not only in the overall number of awards available, but also in administrative procedures. Requests may be made too late, may arrive too late, or may become lost in a bureaucratic morass. It is here that the major obstacles lie for many countries, rather than in the number of scholarships available. During the course of some missions, it became apparent that these two problems may be reversed in their importance. For instance, the administrative procedures of some aid agencies are so cumbersome that what is necessary is a better forecast of requests and streamlining of the procedures for awarding fellowships. It is suggested that at the beginning of each year the recipient country should communicate to the various aid agencies the number of scholarships it wishes to reserve for statistics by level of course. After consultations if the supply of scholarships does not match the demand, the donors should then set this number of scholarships to one side and award them, following accelerated procedures, as soon as the STPA centres decide which candidates they will admit (on the basis of entrance competition results or after examination of application forms).

76. A more rational procedure of awarding scholarships such as this should reduce the difficulties of STPA centres which, at present, may not know how many students can be expected and whether their courses are full up to the last minute before their terms begin. Scholarships cover an important element of their running costs, since they are often the source for the payment of teachers' salaries, at least in part. However, no less important are other funds to improve their operations,

primarily to cover costs such as: teaching materials (micro-computers, calculators, library books, journals, etc.), buildings, special lecturers to assist for example with new courses (particularly to help set up ISE and postgraduate courses), and the training of trainers. A number of centres require more lecturers and engaging expatriates is not always the best solution. It may cost up to three times more to employ a European lecturer than an African on local terms, as is the case at IAMSEA for example, and many countries have the potential to provide their own lecturing staff providing attractive terms of employment can be offered. A possible solution would be to give centres the finance to pay the salaries of national or other African lecturers. It will also be necessary to assist countries in the setting up of courses to train sub-professional staff, for example by providing training officers and teaching materials. For universities manpower assistance can best be provided by developing a link with a Department of Statistics in a European university.

VII. CONCLUSIONS AND RECOMMENDATIONS

The statistical system in ACP African countries

77. Countries themselves, as well as aid agencies, must make efforts to ensure that the training of statisticains produces real results in the improvement of their statistical systems and avoid waste caused by the isolation of statistical activities. In order to achieve these aims, statistical services must be better organised with precise but comprehensive work programmes, and should have units spread throughout the geographic regions of the country and in ministries. However, it is vital that the activities of the whole statistical system should be coordinated in an effective way. Such coordination should cover all aspects of the development of the system, decisions on statistical priorities and harmonisation of classifications and methods. Such coordination may be implemented administratively by the national statistical office seconding staff to other government departments. However, apart from this coordination "at the grassroots", it is also vital that a high-level coordination body should exist which can take decisions at the political level and can enforce them on all those bodies engaged in statistical work. Whether this be a national council for statistics or a planning body it must have the authority of the head of government.

78. In order that this edifice should not be an empty shell, statistical activities must be accorded the resources necessary to achieve the objectives set for them. This undoubtedly means adequate funds to cover other recurrent costs, adequate manpower, and their own computing facilities (mini- or micro-computers) and printing facilities (offset or similar equipment).

79. Improvement of the statistical system is a matter for statisticians themselves to tackle, not for other people. They must "sell" their product, they must make sure that the statistics they produce are meeting the needs of the country. In order to do this they must be the first to use their statistics, making the data more accessible and comprehensible by presenting it well and doing some primary analysis. They must be more concerned with the speed and continuity of their work, giving priority to that which is useful and can be done quickly rather than to large-scale exercises whose results are difficult to use. Their work must demonstrate the value of investing in statistics.

80. In order that all these efforts should not be in vain, the statistical service should be sufficiently attractive that staff are happy to stay in it. To achieve this, better man management is needed, taking full account of the role of training. This should be possible because of the small numbers of staff involved and might be a useful pilot project for the rest of the public service.

81. In March 1983 at Addis Ababa the ECA Conference of Ministers set up a relationship under which African governments are called upon to attach more importance to developing their statistical institutions, and to pay particular attention to the need to create good conditions encouraging the use of the statistics.

This step is encouraging because an improvement of the link between statistics and economic management and planning is based above all on the will of the countries concerned.

Although outside aid is indispensable, no progress can be achieved in most cases without a real will on the part of the countries themselves. This will can be expressed in many ways (coordination of the statistical set-up, planning of resources, etc.).

Priorities for statistical training

82. The most important gap in the training available at present is that of courses for sub-professional staff to remedy the shortage of staff at this level. Highest priority should be given to developing such training programmes locally in each country, this being the most cost-effective way to overcome the problem. The length of time needed to train middle-level staff and clerical staff will differ from country to country according to the educational level of the candidates, and whether they are taught through full-time or part-time studies.

83. For professional training either at ITS/first degree level or ISE/postgraduate level, stronger emphasis should be given to courses in statistical methods rather than mathematical statistics, with more attention paid to ways of processing and presenting information in order that graduates should have a better idea of how to organise statistical work. The accent should be laid on data collection and analysis in those sectors most important in African economies, such as agriculture and food supply.

84. In order to give secondary school-leavers a better preparation for statistical work and further training in statistics, various additional types of training are needed, for instance, teaching of basic arithmetic and mathematics to clerical officers and future middle-level officers, and courses to bring candidates up to the level required to be admitted to degree courses.

85. Other types of training are needed for the providers of raw data (company accountants, administrators, etc.), for the users of statistics (those concerned with the day-to-day management of the economy, such as the Ministry of Finance and the Central Bank, or the planners) and for the statisticians themselves, (short courses

in statistical computing, exchange of experience between countries, and so on). These are necessary in order to encourage better contacts and understanding between all three groups, and will complete the training picture.

86. The development of middle-level training courses should be accompanied by harmonisation of the syllabus taught and the level of qualification or recruitment. This is necessary in particular to facilitate progression from one level of training to the next in order to avoid repetition of material and to minimise the time spent on training courses. For the African region as a whole this is a task which the STPA advisers could undertake. For the French-speaking countries the CESD can play this role of coordination because of its experience of the common competition for ITS courses. In the English-speaking countries, harmonisation of middle-level qualifications might be developed within the framework of the Institute of Statisticians (UK).

Resources needed for implementation

87. Setting up local training facilities for sub-professional staff is dependent upon the willingness of the country to do so. The resources needed to implement such a project are modest: a full-time local professional statistician is needed as a training officer, perhaps with the assistance of an externally funded training adviser when the course is set up; two or three classrooms; stationery and small items of equipment such as calculators;and funds to pay part-time lecturers (about 2,500 ECU a year). The students on these courses will almost certainly already be in employment and will therefore receive their normal salaries, but if not they will require a scholarship.

88. In more general terms, countries have to decide whether or not they wish to employ statisticians at each level, professional and sub-professional. If they wish to do so, they must translate this desire into action by making sure that adequate numbers of fellowships are awarded for the study of statistics, whether they are financed by the country itself, or by bilateral or multilateral donors.

89. In order to avoid administrative delays and bottlenecks in the award of fellowships by aid agencies, each country should plan its requests, reserving a certain number of fellowships for statistical training. This should be matched with a streamlining of procedures to minimise the time taken to award the "reserved" fellowships as soon as students are accepted for courses or pass the entrance examination.

90. Practical assistance should be given to the existing training centres to help them to function better. This may take the form of new buildings, equipment or lecturers. Assistance will be needed particularly to set up postgraduate or ISE courses at STPA centres. As far as training of trainers is concerned, the most efficient way to coherent is to allow the centres to recruit trainee teachers to give them a real possibility to acquire a teaching ability.

Follow-up action

91. The employment of statisticians, their training needs and the ways in which these might be met should be kept constantly under review so that the recommendations of this report may be implemented effectively, their results may be evaluated and training programmes may respond to changing needs. It is particularly important for the STPA centres to know that courses are being developed on a national level, not least because their experience could be used to assist statistical services in these projects.

VIII. ACTIONS TO BE PURSUED BY EXTERNAL AID

92. The response to the request made by ACP countries for assistance for the STPA should be so give priority for financing the following actions

a. to provide equipment and other types of support to the STPA centres (financial support to heavy equipment, in particular micro computers, to cover current expenditure...);

b. to make possible an efficient training of trainers, i.e. to allow the recruitment by training centres of trained teachers who might be get a real opportunity acquire a teaching ability,

c. to establish higher level training courses in Africa i.e. the establishment of postgraduate courses in applied statistics in at least two English-speaking centres with a wholly national role and the transfer of the IAW course to at least two French-speaking centres,

d. to support refresher courses, seminars and workshops which bring together all those involved in producing and using statistics, organized in Africa either by STPA centres or STPA associate centres such as the Turin Centre for Advanced Training in the ILO;

e. to assist training which is orientated towards statistical computing, agricultural and food supply statistics and current economic statistics, by providing micro-computers and by financing courses or workshops,

f. to support the setting up of local training facilities for middle-level staff and statistical clerks.

93. In addition, proposals should be made to allow better planning of scholarships and to enable streamlining of the procedures for awarding them. A general improvement of resources allocation procedure would also be needed in order to overcome some development constraints now existing.

94. Actions to be supported by external aid in the countries

		(1)	(2)
BENIN	- development of local facilities for middle level training (AD and AT) (*)	N	S
	- special and refresher courses organised locally (National Accounts, External Trade, Automatic Data Processing - ADP)	N/R	S
BOTSWANA	- no country-specific recommendations		
BURUNDI	- in service courses	N	S
	- creation of local facilities for middle-level training (AD)	N	S
	- preliminary training for candidates for ITS and ISE competitions	N/R	S
CAMEROON	- seminars organised locally for statisticians and users/suppliers	N/R	S
	- ADP refresher courses organised locally	N/R	S
CENTRAL AFRICA REPUBLIC	- creation of local facilities for middle-level training (AD and AT)	N	S
	- preliminary courses for candidates to ITS and ISE competitions	N/R	S
CONGO	- in service training for AT	N	S
	- development of local facilities for middle-level training (AT)	N	S
	- preliminary training for candidates to ITS and ISE competitions	N/R	S
IVORY COAST	- seminars organised locally for statisticians and users/suppliers	N/R	S
	- refresher courses in ADP	N/R	S
ETHIOPIA	- further development of local facilities for middle-level training	N	S
	- supply of micro-computing equipment to Statistical Department of Haile Abiba University	N	S
	- refresher courses organised locally in ADP	N/R	S

(*) AD = Adjoint technique AT = Agent technique
(1) Letter N means that the action concerned has a national character
Letter R a regional one. Both letters confer to the action both characters.
(2) Letter S means the action could be realised in a short period (1-2 years), letter M in a longer one or that it has to be considered after other actions.

GABON	- creation of local facilities for middle-level training (AD)	N	S
	- in-service training for AT	N	S
	- preliminary courses for candidates for ITS and ISE competitions	N/R	S
GAMBIA	- no country-specific recommendations		
GHANA	- development of local facilities for middle-level training	N	S
GUINEA	- creation of local facilities for middle-level training	N	S
KENYA	- no country-specific recommendations		
LESOTHO	- no country-specific recommendations		
LIBERIA	- further development of local facilities for middle-level training	N	S
	- micro-computing equipment, library equipment, (for the University, Statistical Department)	N	S
MADAGASCAR	- creation of local facilities for middle level training	N	S
	- seminars and refresher courses organised locally	N/R	S
MALAWI	- development of local facilities for middle-level training	N	S
MALI	- creation of local facilities for middle-level training	N	S
	- seminars organised locally for statisticians and users/partners	N/R	S
MAURITANIA	- development of local facilities for middle-level training	N	S
	- preliminary courses for ITS and ISE competitions	N/R	S
MAURITIUS	- no country-specific recommendations		
NIGER	- creation of local facilities for middle-level training	N	S
	- seminars organised locally for statisticians and users/partners	N/R	S
	- preliminary courses for ITS and ISE competitions	N/R	S

NIGERIA	- no country-specific recommendations		
RWANDA	- refresher courses organised locally (agricultural statistics, micro-computing)	N/R	S
	- follow-up of the local training for middle-level personnel	N	S
SENEGAL	- seminars and refresher courses organised locally	N/R	S
SEYCHELLES	- no country-specific recommendations		
SIERRA LEONE	- creation of local facilities for middle-level training	N	S
	- preparation for university studies	N	S
SOMALIA	- further development of local facilities of middle-level training	N	S
	- organisation of foreign languages courses to make easier the follow-up of studies	N	S
SUDAN	- creation of local facilities for middle-level training;	N	S
SWAZILAND	- further development of local facilities for middle-level training	N	S
TANZANIA	- refresher courses and seminars organized locally	N/R	S
TOGO	- development of in-service training for AF	N	S
	- creation of local facilities for middle-level training (AD)	N	S
	- refresher courses organised locally	N/R	S
UGANDA	- creation of local facilities for middle-level training	N	S
ZAIRE	- creation of local facilities for middle-level training	N	S
	- refresher courses for ADP	N/R	S
	- preliminary courses for VTS and ICE competitions	N/R	S
ZAMBIA	- re-start of the local facilities for middle-level training;	N	S
ZIMBABWE	- further development of in-service training	N	S
	- creation of a post-graduate training in applied statistics.	N/R	S

95. Actions to be supported by external aid in the STPA Training Centres (*)

Department of Statistics University of Botswana	- support in the reorganisation of the programme	S
	- supply of equipment (micro-computers, reprographic equipment)	S
Department of Statistics University of Legon/Ghana	- technical assistance, visiting professors provided by	S
	- twinning with a european university	S
	- 50 calculators	S
	- project of new buildings	M
Department of Statistics University of Ibadan/Nigeria	- supply of micro-computers	S
	- support in establishing a library	S
Department of Statistics National University of Lesotho	- 15 programmable calculators	S
	- technical assistance for the reorganisation of the programmes	S
EASTC Dar-Es-Salaam/Tanzania	- technical assistance for the organisation of level III courses (Institute of Statisticians)	S
	- new buildings	M
	- micro-computers	S
ISAE Makerere University/Uganda	- training of trainers and visiting professors through	S
	- twinning with a european university	S
	- support to regular activity	S
	- 50 calculators	S
	- office equipment	S
	- micro-computers	M
	- new buildings	M
IGFEA Yaoundé/Cameroon	- support in the establishment of an ISE training facility	M
	- supply of micro-computers	S
	- support for organising refresher courses locally	S
IAMSEA Kigali/Rwanda	- supply of micro-computers	S
	- local training of trainers	S
	- new buildings and equipment	M
	- support in the organisation of seminars	S

(*) All these actions have a regional aspect

ENSEA Abidjan/Ivory Coast	- supporting the establishment of ISE training facilities	M
	- supply of micro-computers	S
	- organisation of seminars and refresher courses	S
	- new buildings	M
CESD Paris	- supply of micro-computers	S
	- financial support to prepare booklets with past exam papers to be distributed to candidates and to be used in the preliminary courses for examinations	S
	- organisation of seminars and refresher courses	S
	- preparation of the transfer of the ISE training facilities to Africa	M
	- development of coordinating activities of the French-speaking training centres	S/M
ENEA Dakar/Senegal	- further to a recommendation of the Third Meeting of Directors of STPA centres, the needs of this centre will be indentified from the elements mentioned in the report on Senegal.	

CENTRES PARTICIPANTS AU PPCA
CENTRES PARTICIPATING TO STPA

Centres anglophones/English speaking centres

Department of Statistics - University of Botswana

Department of Statistics - University of Ibadan

Department of Statistics - National University of Lesotho

East African Statistical Training Centre, Dar-Es-Salaam, Tanzania

Institute of Statistics and Applied Economics, Makerere University, Uganda

Regional Institute for Population Studies, Ghana

Centres francophones/French speaking centres

Centre Européen de Formation des Statisticiens Economistes des Pays en Voie de Développement - Paris, France

Ecole Nationale d'Economie Appliquée - Collège Statistique, Dakar, Sénégal

Institut Africain et Mauricien de Statistique et d'Economie Appliquée
Kigali, Rwanda

Institut de Formation et de Recherches Démographiques - Yaoundé, Cameroun

Ecole Nationale Supérieure de Statistique et d'Economie Appliquée
Abidjan, Côte d'Ivoire

Institut des Techniques de Planification et d'Economie Appliquée
Alger, Algérie

Institut National de Statistique et d'Economie Appliquée - Rabat, Maroc

Institut de Statistique, de Planification et d'Economie Appliquée
Yaoundé, Cameroun

Centres associés européens/European associated centres

Centre de recyclage de Munich pour statisticiens économistes des pays en voie de développement, Carl Duisberg Gesellschaft - Munich, R.F.A. (Munich Centre for Advanced Training in applied statistics for developing countries)

Institute for Development Studies - Brighton, United Kingdom

Department of Applied Statistics - University of Reading, U.K.

Applied Statistics Research Unit - University of Kent, U.K.

Institute for Social Studies - The Hague, Netherlands

GLOSSARY

ACP	African, Carribean and Pacific States
BEPC	French-equivalent to O level
CESD	European Training Centre for Economist Statisticians from Developing countries Paris, France
EASTC	East African Statistical Training Centre Dar-Es-Salaam, Tanzania
ECA	United Nations Economic Commission for Africa
ENEA	National Training Centre for Applied Economics Dakar, Senegal
ENSEA	National Superior Training Centre for Statistics and Applied Economics Abidjan, Ivory Coast
IDS	Institute for Development Studies Brighton, United Kingdom
IFORD	Training and Research Institute in Demography Yaoundé, Cameroon
IAMSEA	African and Mauritian Institute for Statistics and Applied Economics Kigali, Rwanda
INE	National Institute for Economics Cotonou, Benin
ISAE	Institute of Statistics and Applied Economics Makerere, Uganda
ISE	French speaking country equivalent for postgraduate diploma in applied statistics and economics
ISPEA	Institute of Statistics, Planning and Applied Economics Yaoundé, Cameroon
ITS	French speaking country equivalent for first degree diploma in applied statistics
NHSCP	United Nations National Household Survey Capability Programme
RIPS	Regional Institute for Population Studies Ghana
STPA	Statistical Training Programme for Africa